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LETTER

FROM

THE SECRETARY OF WAR,

TRANSMITTING

TOPOGRAPHICAL REPORTS,

MADE WITH A VIEW TO ASCERTAIN THE PRACTICABILITY OF
UNITING THE WATERS OF ILLINOIS RIVER, WITH
THOSE OF LAKE MICHIGAN.

DECEMBER 28, 1819.

Read, and ordered to lie upon the table.

WASHINGTON :

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1819.

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DEPARTMENT OF WAR,

28th DECEMBER, 1819.

SIR: In compliance with a resolution of the House of Representatives, of the 15th inst. directing the Secretary of War "to lay before that House the several Topographical reports that have been made to the War Department, in pursuance of instructions to that effect, respecting the practicability of uniting, by a canal, the waters of the Illinois river, and those of Lake Michigan, and such other information as he may be in possession of, on that subject," I have the honor to transmit an extract of Major Long's report, and a copy of a report made by R. Graham and Joseph Philips, Esquires, which comprehend all the information on the subject in this Department.

I have the honor to be,

Very respectfully, Sir,

Your most obedient servant,

J. C. CALHOUN.

Hon. HENRY CLAY,

Speaker of the House of Representatives U. S.

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EXTRACT from a Report of Major Stephen H. Long to George Graham, Esq. Acting Secretary of War, dated Washington, March 4th 1817.

“The Illinois is formed by the union of three considerable Rivers, the Des Plaines, the De Page, and the Kankakee; the last of which is nearly double the size of either of the two former. The Illinois is about 300 miles in length, and is of variable width, from seventy yards to one mile. It has a very moderate current, and a depth of water sufficient to render it navigable, at all times, for boats of considerable burden, about 230 miles from its mouth. At the mouth of the Vermillion, there are rapids, perceivable only in the lower stages of winter. Farther up, the water is not, generally, so deep as it is below the Vermillion.

The Valley of the Illinois varies in its width, from three to ten miles; is, generally, flat and marshy, and, for the most part, subject to inundation, when the river has no more than a medial height. In some parts of it, however, prairies and bottoms, of considerable extent, are to be met with, elevated much above high water mark. In ascending the river, the bluffs gradually decrease in height, being about 150 feet high at the mouth, and about 100 feet at the head of the river. Imbedded in the bluffs, are strata of limestone, slate and coal, which, occasionally, make their appearance along the surface of the declivities.

The river Des Plaines is a small stream rising in the low lands, bordering upon the west side of Lake Michigan, and has its general course in a southwesterly direction. The valley of this river has an average width of about one mile, and is terminated on both sides by regular banks, nearly parallel to each other, extending along the river about 30 miles from the head of the Illinois. In ascending this river, also, the banks or bluffs gradually decrease in height, being, as before mentioned, about 100 feet high at the mouth, and only 20 or 25 at the distance of 30 miles higher up the river, where, instead of maintaining their parallel direction, they form nearly right angles with the course of the river, that on the right taking an easterly, and that on the left a north-westerly course; but, being gradually inflected from these courses, they form an extensive curve, encircling a large tract of flat prairie, in no part elevated more than 12 or 14 feet above the common level of the water in this vicinity. The river, throughout the above mentioned distance, has 4 or 5 short rapids or ripples that make their appearance only in times of low water. In every other part, it has the appearance of being a chain of stagnant pools and small lakes, affording a sufficient depth of water for boats of moderate draught.

In the flat prairie, above mentioned, is a small lake, about 5 miles in length, and from 6 to 30 or 40 yards in width, communicating both with the river Desplanes, and Chicago river, by means of a kind of canal, which has been made partly by the current of the water, and partly by the French and Indians, for the purpose of getting their boats across in that direction, in time of high water. The distance from the river Desplanes to Chicago river, by this water course, is about 9 miles; through the greater part of which, there is more or less water, so that the portage is seldom more than 3 miles in the driest season; but in a wet season, boats pass and repass with facility between the two rivers.

The rivers De Page and Kankakee bear nearly the same character, in regard to their bluffs, valleys, &c. that has been given to the Desplanes. The former of these rivers takes its rise a few miles west of that of the Desplanes, and has a course nearly parallel with it. The latter rises in a flat marshy country in the neighborhood of the St. Joseph of the Lake, and runs a meandering course westwardly, passing the southern extremity of Lake Michigan, at the distance of 20 or 30 miles from it. Near the head of this river is a small creek falling into St. Joseph, through which boats have passed in time of high water, from the St. Joseph to the Kankakee. The country through which the Desplanes, the De Page, and the Kankakee rivers take their course, appears to be underlaid with a vast bed of limestone, which occasionally makes its appearance in the valleys of those rivers, covered with a soil too thin to support vegetation.

Chicago river is merely an arm of the lake, dividing itself into two branches, at the distance of one mile inland from its communication with the lake. The north branch extends along the western side of the lake about thirty miles, and receives some few tributaries. The south branch has an extent of only 5 or 6 miles, and receives no supplies, except from the small lake of the prairie above described. The river and each of its branches are of variable widths, from 15 to 50 yards, and, for 2 or 3 miles inland, have a sufficient depth of water to admit vessels of almost any burden. The entrance into lake Michigan, however, which is 30 yards wide, is obstructed by a sand bar, about 70 yards broad, upon the highest part of which, the water is usually no more than two feet deep. The difficulty of removing this obstruction would not be great. Piers might be sunk on both sides of the entrance, and the sand removed from between them. By this means, the river would be rendered a safe and commodious harbor for shipping, a convenience which is seldom to be met with on the shores of lake Michigan.

The St. Joseph of the lake is navigable for batteaux to a very considerable distance, in all stages of the water.

The St. Joseph and St. Mary's of the Maumee, are rivers of considerable size and extent. The latter, in wet seasons, is navigable for perogues to fort St. Mary's, one hundred and fifty miles from its confluence with the former, by the course of the river. Its branches

interlock with those of the Wabash and Big Miami. The St. Joseph is navigable about 50 miles, its tributaries interlocking with those of the St. Joseph of the lake, the Kankakee, and the Wabash. The Maumee of the lake is 100 miles in length, and is navigable for batteaux and perogues throughout its whole extent, in all stages of the water: about thirty miles above its mouth are the Wolf Rapids. The face of the water, however, is not so great as to occasion any very serious obstruction to the navigation of the river.

The courses and relative positions of the several rivers and creeks may be seen by recurring to the plans.

Proposed Canals and Roads.

A Canal uniting the waters of the Illinois, with those of Lake Michigan, may be considered the first in importance of any in this quarter of the country, and, at the same time, the construction of it would be attended with very little expense, compared with the magnitude of the object. The water course, which is already opened between the river Desplanes and Chicago river, needs but little more excavation to render it sufficiently capacious for all the purposes of a canal. It may be supplied with water at all times of the year, by constructing a dam of moderate height across the Des Planes, which would give the water of that river a sufficient elevation to supply a canal extending from one river to the other. It would be necessary also, to construct locks at the extremities of the canal, that communicating with Chicago river being calculated to elevate about six feet, and that communicating with the Des Planes, about four feet.

To render the Des Planes and Illinois navigable for small boats and flats requiring but a small draught of water, nothing more is necessary than the construction of sluices, in a few places where there are ripples of a sufficient width to admit the boats to pass through them. This may be effected by clearing away the loose stones from the bottom, and forming banks riveted with stone two or three feet high, on each side of the sluice. Thus, a water communication between the Illinois and lake Michigan may be kept open at all times sufficient to answer all the purposes for which a canal will be wanted, for many years to come. A canal uniting the St. Joseph of the lake with the Illinois, by way of the Kankakee, may be constructed also in a similar manner, and with great facility, except that the distance by this route is considerably greater.

There are various other places where water communications may be opened in this quarter, by means of canals, to great advantage, of which the following are but a small proportion, viz. Between the St. Joseph of the lake, and the St. Joseph of the Maumee; between the latter and the Wabash; and between the Illinois and the Wabash, by way of the Saugano river. A canal also uniting the Mississippi and Ohio, a little above their junction, would be of great public utility, particularly should a general depot for military stores be established

near the mouth of the latter. The objects of this canal would be to shorten the distance by water from the contemplated site of the depot, northwardly, to avoid a part of the Mississippi, difficult to navigate, and to render the depot accessible by an easy and safe communication, both from the Ohio and Mississippi."

KASKASKIA, April 4th, 1819.

SIR: In addition to the notes of Mr. Sullivan, the surveyor, which describe the face of the country over which the lines were run, we beg leave to suggest some views which occurred to us on the subject of communications between the river Illinois and the Michigan Lake.

By reference to the map herewith forwarded, it will be seen, that the little river *Plein*, coming from the north-west, approaches within ten miles and a quarter of Lake Michigan, and then, bending to the south-west, unites with the *Theakiki*, at the distance of about fifty miles, and forms the river Illinois.

The country between the Lake and the *Plein*, at this point of approach, is a prairie (natural meadow) without trees, covered with grass, and, to the eye, a perfect level. From the bank of the *Plein*, standing on the ground, the trees are distinctly seen, with the naked eye; at Fort Dearborn, on the shore of the lake; from Fort Dearborn they are, in like manner, seen on the bank of the *Plein*. Standing on any intermediate point, between the lake and the river, and the judgment is at a loss to say to which side the ground declines, and whether the level of the *Plein* or the lake is the highest. It was, however, determined, from certain data, that the level of the river was two feet, or thereabouts, above the level of the lake. From this view it would seem that the cutting of a canal, in this place, between the *Plein* and the lake, would be a work of neither skill, difficulty, or expense. Small, however, as the labor would be, under this view, it is still diminished upon a close examination, and by finding that an arm of the lake called *Chicago* puts out in the direction of the *Plein*, and that an arm of the *Plein*, also called *Chicago*, puts out in the direction of the lake. They approach within two miles of each other; so that, in common water, there is only dry ground to that extent between them. The character of these two arms is essentially different; that of the lake being but about sixty feet wide, and from ten to forty feet deep; that of the river being, in high water, from four to six feet deep, and, in places, a mile wide, and, in low water, either dry or reduced to a gutter. Between the heads of these two arms is also a gutter, which is dry in the dry seasons of summer and fall, and full of water in the spring, and, when thus filled with water, the boats, of six or eight tons, engaged in the Mackinaw and Mississippi trade, run through, backwards and forwards, so as to

make no portage between Mackinaw and the Mississippi. This gutter, judging from the appearance of others now forming, was, at first, a path worn out by the feet of those who carried things across the portage, and afterwards deepened by the attrition of the waters, until formed into a little canal. The wind, alone, gives the water a current in this little canal, and its direction depends upon the course of the wind. Objects have been seen to float out of it, from the same point, to the river and to the lake.

It is incontestibly true, that an east wind will drive the water of the lake through this gutter into the *Plein*, and that water from Lake Michigan has been discharged, by this outlet, into the Mississippi, and thence into the Gulf of Mexico. It is equally incontestible, that the waters of the *Plein* have been driven, by the same channel, into the lake; and these phenomena may now be witnessed, at any time, when the waters are high and the wind blows hard. It follows, therefore, that, to finish the canal began by nature, in this place, would require, as we have already said, but little of skill, time, or expense. On opening the canal, however, two difficulties would be experienced.

1st. The *Plein* would be found to be above the level of the canal: its water, of course, would be diverted from its natural channel, and pass by the canal into the lake.

2d. Supposing that evil remedied by a lock to lift vessels into the *Plein*, yet the *Plein*, during half the year, does not contain water enough to float a boat, and so could not become useful as a national highway.

To remedy this defect of water in the *Plein*, two projects suggest themselves. 1st. To sink the bed of the *Plein* below the level of the canal, and thus increase the depth of the *Plein* as well by feeding it out of the lake, as by collecting its water into a narrower channel. 2d. To make the canal unite with the *Plein* lower down in its course. A few miles lower would be sufficient to give the water of the Lake a descent into the river, as the *Plein* has a sensible descent in this place, in so much that the people of Chicago call it "The Rapids," having no other word to distinguish moving water from that which stands still. Of the *Plein* below its point of approach to the lake, we would remark, that it has hardly the attributes of a river, being in most places without current, and without banks, lying as a sheet of water in the Prairie, sometimes a mile wide, and so shallow that the tall grass appears almost every where above its surface. Having said thus much of the facility of communication by the *Chicago*, we would now remark, that several other routes are perfectly practicable. 1st. From a point in the lake south of *Chicago* to enter the *Plein* below mount *Juliet*, at or near what is called lake *du Page*, but which is only a dilation of the waters of the *Plein*. This route would lay over level Prairie, through a multitude of small lakes, or ponds, which have neither name or place in any map. 2. By a canal leaving the lake near its south end, and uniting with the *Theakiki* just above its confluence

with the *Plein*. Both of these canals would be fed from the lake, would require few or no locks, would go over ground of the same sort, would be 50 or 60 miles long, and would join the waters of the Illinois at points from which it is constantly navigable. A third route was spoken of, but not seen by us. It would lie between the Theakiki and the St. Joseph of the lake. Information says, that it has been practised by French traders. You will perceive, sir, that we have not spoken of the nature of the soil through which these several routes would pass. Not being our business to search for, and report upon the practicability of water communications, our observations were limited to what fell under the eye while engaged in another duty, and in making this report to you, it is our object to excite inquiry, not to furnish plans of practicable projects. We shall, therefore, only say, on this point, that the country in general, and the bed of the *Plein*, exhibited much loose stone and pebble, and firm ground.

To conclude, the route by the *Chicago*, as followed by the French since the discovery of the Illinois, presents at one season of the year an uninterrupted water communication for boats of six or eight tons burthen, between the Mississippi and the Michigan lake; at another season, a portage of two miles; at another, a portage of seven miles, from the bend of the *Plein* to the arm of the lake; at another, a portage of fifty miles, from the mouth of the *Plein* to the lake; over which there is a well beaten wagon road, and boats and their loads are hauled by oxen and vehicles kept for that purpose by the French settlers at the *Chicago*.

Respectfully,

Your obedient servants,

[Signed]

R. GRAHAM,
JOSEPH PHILIPS:

The Hon. J. C. CALHOUN,
Secretary of War, Washington.